



# BRUNO LÉVY

Born May, the 14th, 1972 (44 years old)

*ALICE team, Inria, Villers-lès-Nancy*

<http://www.loria.fr/~levy>

Google Scholar: <http://scholar.google.fr/citations?user=maUrcQsAAAAJ> h-index: 31 citations: 5950

## Education

- 2000** Post-doc — Stanford — *Palo-Alto, USA*
- 1996-1999** Ph.D. — Loria and CRPG lab. — *Nancy, France*
- 1996-1999** Master degree — Loria and CRPG lab. — *Nancy, France*
- 1992-1995** School of Computer Science and Applications — *Nancy, France*
- 1990-1992** Intensive Mathematics (“classes préparatoires”) — *Nancy, France*

## Professional Record

### Current Position

**Since 2008** Inria Senior Researcher (Research Director) — head of the ALICE team (20 people / 8 faculty)  
(promoted as 1<sup>st</sup> class Research Director in 2012)

### Previous Position

**2000-2008** Inria Junior Researcher (Research Associate) — head of the ALICE team (that I initiated in 2004)

## Research Highlights

My initial topic is Geometry Processing. From 1998 to 2006, I focused on the problem of **mesh parameterization**, and produced several algorithms that became a de-facto standard (LSCM, ABF++, PGP), now used in several commercial and open-source softwares (including Maya, Blender, 3DSMax, Gocad).

Then I contributed to **two start-up creations**, for transferring my results in 3d gridding for oil exploration ([Paradigm/Earth Decision Sciences](#)), and visualization ([Scalable Graphics](#)).

From 2006 to 2016, I focused on some difficult numerical problems in Scientific Computing. I contributed to lay **spectral geometry processing** fundamentals and made it practical with the first algorithm that computes a Fourier-like basis for surface meshes (manifold harmonics). I also established the **regularity of Lloyd’s energy** and proposed a Newton solver for quantization, generalized it to propose the first automatic algorithm for **hex-dominant meshing** ( $L_p$ -CVT) and finally the first solver for **3D semi-discrete optimal transport**. Most of my research results are available in my [GEOGRAM](#) and [GRAPHITE](#) Open-Source softwares.

## Publication Records

**ACM Transactions on Graphics** : 16 articles —Including two SIGGRAPHs as a **single author** (2001,2003)

**EG, CGF J., ACM SGP, IEEE TVCG** : 17 articles

According to Google Scholar (08/2016), 16 of my articles are cited more than 100 times. My article on Least Squares Conformal Maps (SIGGRAPH 2002) has **1000 citations**. It is **one of the 30 most cited SIGGRAPH papers ever**, according to *Metagraphics: Impact papers from SIGGRAPH/TOG, Nehab and Sander, SIGGRAPH ASIA 2013*

## Supervision of Students

- 2002-2016** Supervised 17 Ph.D. theses — (15 defended, 2 on-going, 5 got academic positions after defense)
- 2004-2016** Supervised 2 habilitation theses (S. Lefebvre and D. Sokolov) — (both defended)
- 2005-2016** Supervised 13 post-docs — (4 of them got academic positions)

## Teaching Activities

- since 2004** Numerical Geometry — U. Nancy, School of Geology, master degree
- since 2012** Algorithmic Gems — Nancy school of mines, master degree
- 2007-2014** Organization of courses given at the major conferences — (ACM SIGGRAPH: 5 courses)

## Organization of Scientific Meetings

- 2014** [Eurographics](#) — program co-chair — *Strasbourg, France, > 400 participants*  
(*Eurographics is the main European conference in Computer Graphics*)
- 2013** [Pacific Graphic](#) — program co-chair — *Singapore, more than 200 participants*
- 2013** [CAD Graphics](#) — conference co-chair — *Hong-Kong, more than 100 participants*
- 2010** [ACM/EG Symposium on Geometry Processing](#) — program co-chair — *Lyon/France, >100 part.*
- 2008** [ACM Symposium on Physical Modeling](#) — program co-chair — *Stony Brook/USA, >100 part.*
- 2007** [ACM Symposium on Physical Modeling](#) — program co-chair — *Tsinghua/China, >100 part.*

## Institutional Responsibilities

- since 2004** Head of the ALICE research team (20 people, 8 faculty) — Inria, Nancy
- since 2012** Vice head of the Charles Hermites federation (4 research centers in CS and math.) — Nancy
- 2014** Member of the committee for outstanding junior researcher award — Inria national
- 2011-2013** Head of the “algorithms, computations and images” department (6 research teams) — Nancy
- 2010-2011** Member of the Executive Committee of the research center — Inria, Nancy
- 2010** Coordinator for the evaluation of the “Interaction and Visualization” theme — Inria national
- 2013, 2014** President of the hiring committee for junior researchers (research associates) — Inria, Nancy
- 2005-2010** Member of faculty hiring committees — Nancy, Grenoble, Strasbourg / France
- 2002-2016** Member of 57 Ph.D. and 14 habilitation committees — France, Germany, Hong-Kong, USA

## Commissions of Trust

- since 2014** Member of the Scientific Advisory Board of EDF (National Electricity Company) — Paris, France
- 2010** Evaluation board for the LIRIS lab. (Lyon) — AERES (French Agency of Scientific Evaluation)
- since 2010** IEEE Transactions on Visualization and Computer Graphics — Member of the Editorial board
- since 2010** Graphical Models (Elsevier) — Member of the Editorial board
- since 2014** Member of the Eurographics Ph.D. Thesis Award committee
- 2000-2016** Program Committee member of the major conferences on a regular basis  
ACM SIGGRAPH (2008, 2012, 2013, 2015), Eurographics, ACM/EG SGP (every year since its inception)

## Major Collaborations

- 2006-2016** W. Wang, Y. Liu, L. Lu (Hong-Kong U.) on optimal sampling and Voronoi diagrams
- 2013-2014** P. Poulin and G.-P. Paillé (U. Montréal, Canada) on volumetric splines
- 2004-2011** G. Turk (GeorgiaTech, USA) and J.-M. Dischler (U. Strasbourg, France) on texturing
- 2003-2011** H.-P. Seidel and R. Zayer (MPII, Germany), A. Sheffer (UBC, Canada), P. Alliez, D. Cohen-Steiner (Inria) and M. Desbrun (Caltech, USA) on mesh parameterization

## Grants (selected)

- 2013** [VORPALINE](#) Proof-of-Concept Grant — Received from the European Research Council
- 2008** [GOODSHAPE](#) Starting Grant — Received from the European Research Council
- 2006** Microsoft Research Grant — Selected from a European-wide call for proposal

## Awards

- 2000** Gilles Kahn award for the best Ph.D. thesis in Computer Science  
*Awarded by the French Computer Science Society (SIF)*
- 2009** Regional Young Researcher Award  
*Awarded by the Regional Scientific Council of Lorraine*
- 2011** **The Inria Young Researcher Award**  
*This yearly prize rewards a scientist under 40 years who made a major contribution through its research, transfer or innovation to the field of computer science and mathematics.*